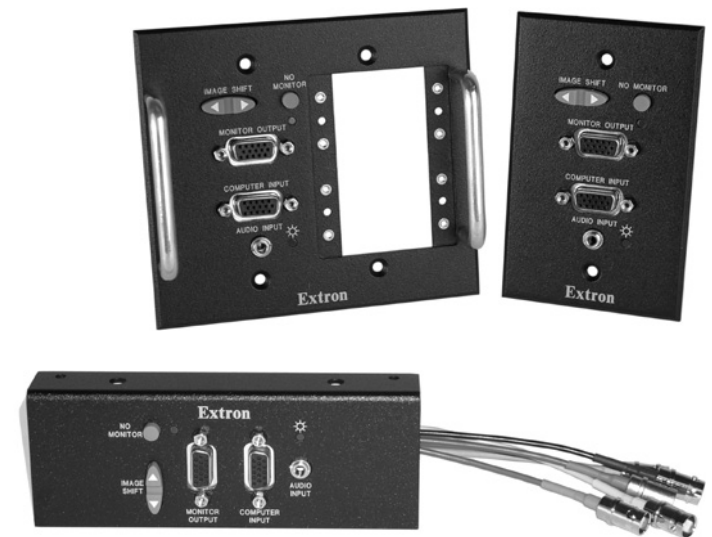


## User's Manual



### *CIA111, CIA114, and CIA114F5* Wall Box and Floor Box Mountable Interfaces

# Precautions

## Safety Instructions • English



This symbol is intended to alert the user of important operating and maintenance (servicing) instructions in the literature provided with the equipment.



This symbol is intended to alert the user of the presence of uninsulated dangerous voltage within the product's enclosure that may present a risk of electric shock.

### Caution

- Read Instructions** • Read and understand all safety and operating instructions before using the equipment.
- Retain Instructions** • The safety instructions should be kept for future reference.
- Follow Warnings** • Follow all warnings and instructions marked on the equipment or in the user information.
- Avoid Attachments** • Do not use tools or attachments that are not recommended by the equipment manufacturer because they may be hazardous.

## Consignes de Sécurité • Français



Ce symbole sert à avertir l'utilisateur que la documentation fournie avec le matériel contient des instructions importantes concernant l'exploitation et la maintenance (réparation).



Ce symbole sert à avertir l'utilisateur de la présence dans le boîtier de l'appareil de tensions dangereuses non isolées posant des risques d'électrocution.

### Attention

- Lire les instructions** • Prendre connaissance de toutes les consignes de sécurité et d'exploitation avant d'utiliser le matériel.
- Conservier les instructions** • Ranger les consignes de sécurité afin de pouvoir les consulter à l'avenir.
- Respecter les avertissements** • Observer tous les avertissements et consignes marqués sur le matériel ou présents dans la documentation utilisateur.
- Eviter les pièces de fixation** • Ne pas utiliser de pièces de fixation ni d'outils non recommandés par le fabricant du matériel car cela risquerait de poser certains dangers.

## Sicherheitsanleitungen • Deutsch



Dieses Symbol soll dem Benutzer in der im Lieferumfang enthaltenen Dokumentation besonders wichtige Hinweise zur Bedienung und Wartung (Instandhaltung) geben.



Dieses Symbol soll den Benutzer darauf aufmerksam machen, daß im Inneren des Gehäuses dieses Produktes gefährliche Spannungen, die nicht isoliert sind und die einen elektrischen Schock verursachen können, herrschen.

### Achtung

- Lesen der Anleitungen** • Bevor Sie das Gerät zum ersten Mal verwenden, sollten Sie alle Sicherheits- und Bedienungsanleitungen genau durchlesen und verstehen.
- Aufbewahren der Anleitungen** • Die Hinweise zur elektrischen Sicherheit des Produktes sollten Sie aufbewahren, damit Sie im Bedarfsfall darauf zurückgreifen können.
- Befolgen der Warnhinweise** • Befolgen Sie alle Warnhinweise und Anleitungen auf dem Gerät oder in der Benutzerdokumentation.
- Keine Zusatzgeräte** • Verwenden Sie keine Werkzeuge oder Zusatzgeräte, die nicht ausdrücklich vom Hersteller empfohlen wurden, da diese eine Gefahrenquelle darstellen können.

## Instrucciones de seguridad • Español



Este símbolo se utiliza para advertir al usuario sobre instrucciones importantes de operación y mantenimiento (o cambio de partes) que se desean destacar en el contenido de la documentación suministrada con los equipos.



Este símbolo se utiliza para advertir al usuario sobre la presencia de elementos con voltaje peligroso sin protección aislante, que puedan encontrarse dentro de la caja o alojamiento del producto, y que puedan representar riesgo de electrocución.

### Precaucion

- Leer las instrucciones** • Leer y analizar todas las instrucciones de operación y seguridad, antes de usar el equipo.
- Conservar las instrucciones** • Conservar las instrucciones de seguridad para futura consulta.
- Obedecer las advertencias** • Todas las advertencias e instrucciones marcadas en el equipo o en la documentación del usuario, deben ser obedecidas.
- Evitar el uso de accesorios** • No usar herramientas o accesorios que no sean específicamente recomendados por el fabricante, ya que podrían implicar riesgos.

### Warning

- Power sources** • This equipment should be operated only from the power source indicated on the product. This equipment is intended to be used with a main power system with a grounded (neutral) conductor. The third (grounding) pin is a safety feature, do not attempt to bypass or disable it.
- Power disconnection** • To remove power from the equipment safely, remove all power cords from the rear of the equipment, or the desktop power module (if detachable), or from the power source receptacle (wall plug).
- Power cord protection** • Power cords should be routed so that they are not likely to be stepped on or pinched by items placed upon or against them.
- Servicing** • Refer all servicing to qualified service personnel. There are no user-serviceable parts inside. To prevent the risk of shock, do not attempt to service this equipment yourself because opening or removing covers may expose you to dangerous voltage or other hazards.
- Slots and openings** • If the equipment has slots or holes in the enclosure, these are provided to prevent overheating of sensitive components inside. These openings must never be blocked by other objects.
- Lithium battery** • There is a danger of explosion if battery is incorrectly replaced. Replace it only with the same or equivalent type recommended by the manufacturer. Dispose of used batteries according to the manufacturer's instructions.

### Avertissement

- Alimentations** • Ne faire fonctionner ce matériel qu'avec la source d'alimentation indiquée sur l'appareil. Ce matériel doit être utilisé avec une alimentation principale comportant un fil de terre (neutre). Le troisième contact (de mise à la terre) constitue un dispositif de sécurité : n'essayez pas de la contourner ni de la désactiver.
- Déconnexion de l'alimentation** • Pour mettre le matériel hors tension sans danger, déconnectez tous les cordons d'alimentation de l'arrière de l'appareil ou du module d'alimentation de bureau (s'il est amovible) ou encore de la prise secteur.
- Protection du cordon d'alimentation** • Acheminer les cordons d'alimentation de manière à ce que personne ne risque de marcher dessus et à ce qu'ils ne soient pas éraclés ou pincés par des objets.
- Réparation-maintenance** • Faire exécuter toutes les interventions de réparation-maintenance par un technicien qualifié. Aucun des éléments internes ne peut être réparé par l'utilisateur. Afin d'éviter tout danger d'électrocution, l'utilisateur ne doit pas essayer de procéder lui-même à ces opérations car l'ouverture ou le retrait des couvercles risquent de l'exposer à de hautes tensions et autres dangers.
- Fentes et orifices** • Si le boîtier de l'appareil comporte des fentes ou des orifices, ceux-ci servent à empêcher les composants internes sensibles de surchauffer. Ces ouvertures ne doivent jamais être bloquées par des objets.
- Lithium Batterie** • Il a danger d'explosion s'il y a remplacement incorrect de la batterie. Remplacer uniquement avec une batterie du même type ou d'un type équivalent recommandé par le constructeur. Mettre au rebut les batteries usagées conformément aux instructions du fabricant.

### Vorsicht

- Stromquellen** • Dieses Gerät sollte nur über die auf dem Produkt angegebene Stromquelle betrieben werden. Dieses Gerät wurde für eine Verwendung mit einer Hauptstromleitung mit einem geerdeten (neutralen) Leiter konzipiert. Der dritte Kontakt ist für einen Erdschluß, und stellt eine Sicherheitsfunktion dar. Diese sollte nicht umgangen oder außer Betrieb gesetzt werden.
- Stromunterbrechung** • Um das Gerät auf sichere Weise vom Netz zu trennen, sollten Sie alle Netzkabel aus der Rückseite des Gerätes, aus der externen Stromversorgung (falls dies möglich ist) oder aus der Wandsteckdose ziehen.
- Schutz des Netzkabels** • Netzkabel sollten stets so verlegt werden, daß sie nicht im Weg liegen und niemand darauf treten kann oder Objekte darauf- oder unmittelbar dagegen gestellt werden können.
- Wartung** • Alle Wartungsmaßnahmen sollten nur von qualifiziertem Servicepersonal durchgeführt werden. Die internen Komponenten des Gerätes sind wartungsfrei. Zur Vermeidung eines elektrischen Schocks versuchen Sie in keinem Fall, dieses Gerät selbst öffnen, da beim Entfernen der Abdeckungen die Gefahr eines elektrischen Schlags und/oder andere Gefahren bestehen.
- Schlitze und Öffnungen** • Wenn das Gerät Schlitze oder Löcher im Gehäuse aufweist, dienen diese zur Vermeidung einer Überhitzung der empfindlichen Teile im Innern. Diese Öffnungen dürfen niemals von anderen Objekten blockiert werden.
- Lithium-Batterie** • Explosionsgefahr, falls die Batterie nicht richtig ersetzt wird. Ersetzen Sie verbrauchte Batterien nur durch den gleichen oder einen vergleichbaren Batterietyp, der auch vom Hersteller empfohlen wird. Entsorgen Sie verbrauchte Batterien bitte gemäß den Herstelleranweisungen.

### Advertencia

- Alimentación eléctrica** • Este equipo debe conectarse únicamente a la fuente/tipo de alimentación eléctrica indicada en el mismo. La alimentación eléctrica de este equipo debe provenir de un sistema de distribución general con conductor neutro a tierra. La tercera pata (puesta a tierra) es una medida de seguridad, no puentearla ni eliminarla.
- Desconexión de alimentación eléctrica** • Para desconectar con seguridad la acometida de alimentación eléctrica al equipo, desenchufar todos los cables de alimentación en el panel trasero del equipo, o desenchufar el módulo de alimentación (si fuera independiente), o desenchufar el cable del receptáculo de la pared.
- Protección del cables de alimentación** • Los cables de alimentación eléctrica se deben instalar en lugares donde no sean pisados ni apretados por objetos que se puedan apoyar sobre ellos.
- Reparaciones/mantenimiento** • Solicitar siempre los servicios técnicos de personal calificado. En el interior no hay partes a las que el usuario deba acceder. Para evitar riesgo de electrocución, no intentar personalmente la reparación/mantenimiento de este equipo, ya que al abrir o extraer las tapas puede quedar expuesto a voltajes peligrosos u otros riesgos.
- Ranuras y aberturas** • Si el equipo posee ranuras o orificios en su caja/alojamiento, es para evitar el sobrecalentamiento de componentes internos sensibles. Estas aberturas nunca se deben obstruir con otros objetos.
- Batería de litio** • Existe riesgo de explosión si esta batería se coloca en la posición incorrecta. Cambiar esta batería únicamente con el mismo tipo (o su equivalente) recomendado por el fabricante. Desachar las baterías usadas siguiendo las instrucciones del fabricante.

# Extron's Warranty

Extron Electronics warrants this product against defects in materials and workmanship for a period of three years from the date of purchase. In the event of malfunction during the warranty period attributable directly to faulty workmanship and/or materials, Extron Electronics will, at its option, repair or replace said products or components, to whatever extent it shall deem necessary to restore said product to proper operating condition, provided that it is returned within the warranty period, with proof of purchase and description of malfunction to:

### USA, Canada, South America, and Central America:

Extron Electronics  
1001 East Ball Road  
Anaheim, CA 92805, USA

### Asia:

Extron Electronics, Asia  
135 Joo Seng Road, #04-01  
PM Industrial Bldg.  
Singapore 368363

### Europe, Africa, and the Middle East:

Extron Electronics, Europe  
Beeldschermweg 6C  
3821 AH Amersfoort  
The Netherlands

### Japan:

Extron Electronics, Japan  
Kyodo Building  
16 Ichibancho  
Chiyoda-ku, Tokyo 102-0082  
Japan

This Limited Warranty does not apply if the fault has been caused by misuse, improper handling care, electrical or mechanical abuse, abnormal operating conditions or non-Extron authorized modification to the product.

*If it has been determined that the product is defective, please call Extron and ask for an Applications Engineer at (714) 491-1500 (USA), 31.33.453.4040 (Europe), 65.6383.4400 (Asia), or 81.3.3511.7655 (Japan) to receive an RA# (Return Authorization number). This will begin the repair process as quickly as possible.*

Units must be returned insured, with shipping charges prepaid. If not insured, you assume the risk of loss or damage during shipment. Returned units must include the serial number and a description of the problem, as well as the name of the person to contact in case there are any questions.

Extron Electronics makes no further warranties either expressed or implied with respect to the product and its quality, performance, merchantability, or fitness for any particular use. In no event will Extron Electronics be liable for direct, indirect, or consequential damages resulting from any defect in this product even if Extron Electronics has been advised of such damage.

Please note that laws vary from state to state and country to country, and that some provisions of this warranty may not apply to you.

## 安全须知 • 中文



这个符号提示用户该设备用户手册中有重要的操作和维护说明。



这个符号警告用户该设备机壳内有暴露的危险电压，有触电危险。

### 注意

**阅读说明书** • 用户使用该设备前必须阅读并理解所有安全和使用说明。

**保存说明书** • 用户应保存安全说明书以备将来使用。

**遵守警告** • 用户应遵守产品和用户指南上的所有安全和操作说明。

**避免追加** • 不要使用该产品厂商没有推荐的工具或追加设备，以避免危险。

### 警告

**电源** • 该设备只能使用产品上标明的电源。设备必须使用有地线的供电系统供电。第三条线（地线）是安全设施，不能不用或跳过。

**拔掉电源** • 为安全地从设备拔掉电源，请拔掉所有设备后或桌面电源的电源线，或任何接到市电系统的电源线。

**电源线保护** • 妥善布线，避免被踩踏，或重物挤压。

**维护** • 所有维修必须由认证的维修人员进行。设备内部没有用户可以更换的零件。为避免出现触电危险不要自己试图打开设备盖子维修该设备。

**通风孔** • 有些设备机壳上有通风槽或孔，它们是用来防止机内敏感元件过热。不要用任何东西挡住通风孔。

**锂电池** • 不正确的更换电池会有爆炸的危险。必须使用与厂家推荐的相同或相近型号的电池。按照生产厂的建议处理废弃电池。

## FCC Class A Notice

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation. The Class A limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference, in which case the user will be required to correct the interference at his own expense.

### NOTE

*This unit was tested with shielded cables on the peripheral devices. Shielded cables must be used with the unit to ensure compliance with FCC emissions limits.*

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# 1

## Chapter One

### Introduction

About this Manual

About the CIA111, CIA114, and CIA114F5

Features

68-809-01 Rev. C  
02 08

*All trademarks mentioned in this manual are the properties of their respective owners.*

## Introduction

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### About this Manual

This manual contains information about installing and operating the Extron CIA111, CIA114, and CIA114F5 interfaces.

### About the CIA111, CIA114, and CIA114F5

The Extron CIA111, CIA114, and CIA114F5 are wall box or floor box mountable computer video interfaces. The CIA111 mounts to a wall or podium using a two-gang junction box and has mounting spaces for up to four single-space Mini Architectural Adapter Plates (MAAPs). The CIA114 mounts in a one-gang junction box and the CIA114F5 is designed to fit the Steel City® 665 floor box.

All three models feature image shift and monitor emulation adjustments from the front panel. Sharpness and output sync can be adjusted using rear panel controls. Each interface accepts one computer video input (15-pin HD), one unbalanced stereo audio input, and a 15-pin HD buffered local monitor output. The interfaces can output audio as either balanced or unbalanced signals.

### Features

**Image shifting control** — Shifts the displayed image to the left or right when you press a front panel rocker button.

**Sharpness control** — Provides image enhancement for high-resolution signals by increasing clarity and image detail, and compensates for signal loss during long cable runs.

**One-button monitor emulation** — Allows you to use the interface without a monitor.

**Audio buffering** — The interface accepts unbalanced stereo computer audio and can output a balanced or unbalanced signal.

**Auto power** — The interface turns on automatically when it senses that an input cable is connected.

**Power** — The unit's 100 VAC to 240 VAC external power supply provides worldwide power compatibility.



## CIA111 and CIA114 Computer Video Interface

# Chapter Two

## Installation and Operation

Installation Overview

Front Panel Features and Cabling

Side Panel Features and Cabling

Pre-Installation Testing and Troubleshooting

Mounting the Interfaces

# Installation

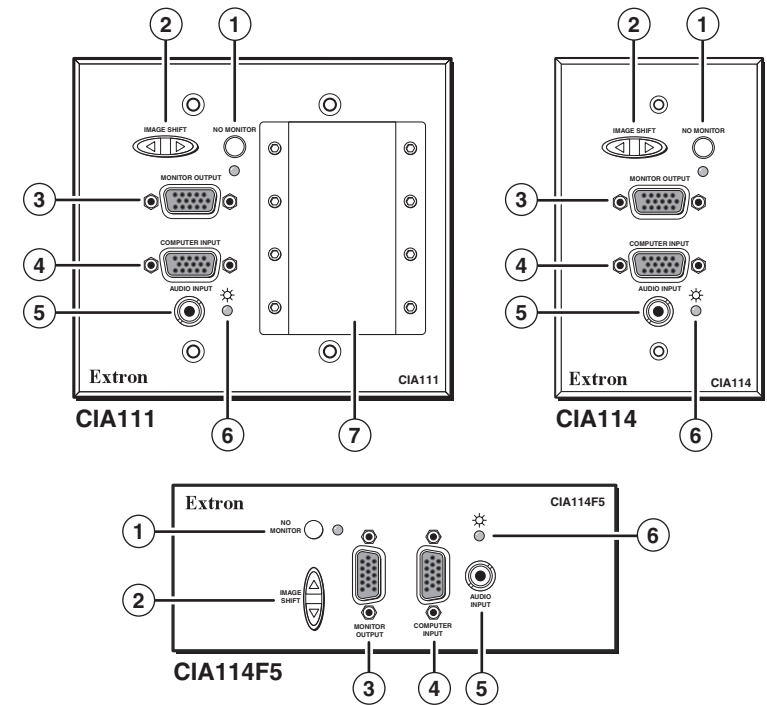
## Installation Overview

**CAUTION** Installation and service must be performed by authorized personnel only. UL Listed electrical boxes are recommended. See "UL Requirements", later in this chapter.

To install and set up a CIA111, CIA114, or CIA114F5 interface, follow these steps:

- 1 Turn all of the equipment off. Make sure that the computer, the interface, and the output devices (projector/monitor, speakers) are all turned off and disconnected from the power source.
- 2 If applicable, prepare the site (see "Mounting the Interfaces", later in this chapter, for information on your specific installation).
- 3 Attach the cables. See "Front Panel Features and Cabling" and "Side Panel Features and Cabling", later in this chapter.
- 4 Set the rear panel Mode Select DIP switches. See "Side Panel Features and Cabling" in this chapter as a guide.
- 5 Test the installation by connecting power cords and turning on the projector/monitor, the audio device, the interface, and the computer.
- 6 The picture should now appear, and sound should be audible. If not, ensure that all devices are plugged in and receiving power. Check the cabling and the DIP switch settings, and make adjustments as needed.
- 7 Disconnect power from all the devices.
- 8 Mount the interface into the wall or floor box (see "Mounting the Interfaces", later in this chapter, to address your specific requirements). If optional MAAP devices are being installed (CIA111 only), see "Mounting the optional MAAP device(s)", later in this chapter.
- 9 Restore power to the devices.

## Front Panel Features and Cabling



**Figure 2-1 — CIA111, CIA114, and CIA114F5 front panels**

- 1 **No Monitor (monitor emulation) button and LED** — If you are not using a local monitor, press this button to turn on the monitor emulation feature, which provides proper ID bit termination on the local monitor output.  
  
On — ID bits 4 and 11 are tied to ground.  
Off — ID bits 4 and 11 are unterminated.  
  
The LED lights to indicate that the feature is on.
- 2 **Image Shift button** — While viewing the displayed image, press this rocker button to adjust the horizontal positioning of the image on screen. Pressing the left (lower on CIA114F5) side of the button moves the image to the left and pressing the right (upper on CIA114F5) side of the button moves it to the right.
- 3 **Monitor Output connector** — Plug a local monitor into this female 15-pin HD connector.
- 4 **Computer Input connector** — Plug a computer video source into this female 15-pin HD connector.

- ⑤ **Audio Input connector** — Plug a computer audio source into this 3.5 mm stereo jack. Wire the connector as shown in figure 2-2.

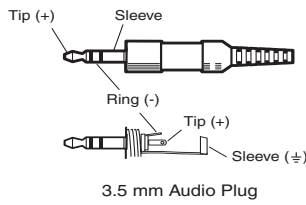


Figure 2-2 — Tip, ring, and sleeve

- ⑥ **Auto Power LED** — This LED lights to indicate that a VGA input cable has been connected to the front panel Computer Input connector and the interface has automatically turned itself on.

**NOTE** The Auto Power LED does **not** light if pin 10 on the Computer Input connector is **not** tied to ground. However, if pin 10 is **not** tied to ground, Auto Power only lights once a video source is connected.

- ⑦ **MAAP mounting opening** — Mount up to four single-space MAAPs in this opening. For instructions, see "Mounting optional MAAP devices (CIA111 only)", later in this chapter.

Side Panel Features and Cabling

See figure 2-3 on the next page.

- ① **Sharpness control** — Use a screwdriver to turn this control clockwise to increase the sharpness setting or counterclockwise to decrease the sharpness setting.
- ② **Power adapter connection** — Plug the included power adapter into this 2-pole direct insertion connector. Wire the connector as shown at right.

**CAUTION** When you are connecting the power supply, voltage polarity is extremely important. Applying power with incorrect voltage polarity could damage the power supply and the CIA. Identify the power cord positive lead by the red heat shrink wrapping around it. To verify the polarity before connection, check the no load power supply output with a voltmeter.

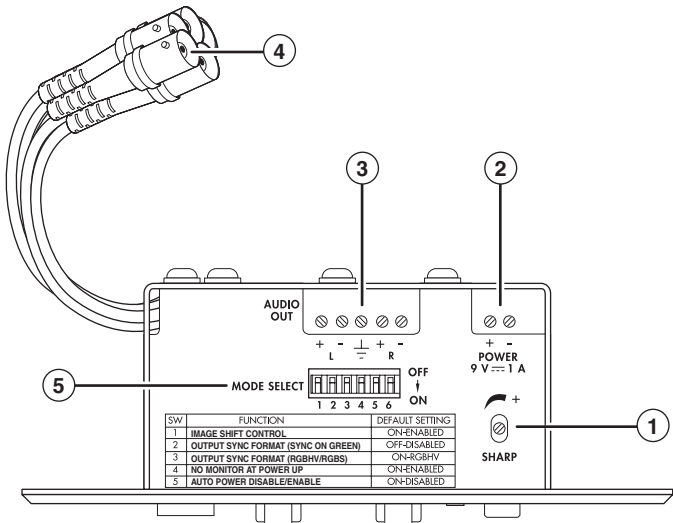
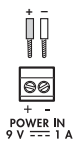


Figure 2-3 — Side panel

- ③ **Audio output connector** — Plug the audio output device into this 5-pole captive screw connector. Wire the connector as shown in figure 2-4.



Figure 2-4 — Audio output connector wiring

**NOTE** The unbalanced output wiring scheme on this output connector is **different** from most other Extron audio devices. Double check if you are not sure.

- ④ **Video output connectors** — Connect these five BNC connectors to the display device's RGB input.



- ⑤ **Mode Select DIP switches** — Set these switches to select settings for horizontal position control, sync format, monitor emulation, and Auto Power.

### 1 — Image Shift control

- On — The Image Shift button is enabled and shifts the location of the image when pressed (default).
- Off — The Image Shift button is disabled and does not shift the location of the image when pressed.

### 2 — Output sync format (sync on green)

- On — The interface outputs RGSB video.
- Off — The interface outputs RGSB or RGBHV video (default). See switch 3, on page 2-6, to select between RGSB and RGBHV.

### 3 — Output sync format (RGSB or RGBHV)

- On — The interface outputs RGBHV video (default).
- Off — The interface outputs RGSB video.

### 4 — No Monitor at Power Up

- On — The interface powers up with No Monitor enabled (default).
- Off — The interface powers up with No Monitor disabled.

### 5 — Auto Power Disable

- On — The interface does not power up or down automatically; it stays on unless you remove power by disconnecting the power cable.
- Off — The interface powers up automatically when it senses an input sync signal, and turns itself off when the sync signal is removed.

### 6 — Not used

---

## Pre-installation Testing and Troubleshooting

Before installing the interface into the wall or furniture, test the system to verify that the connections and settings are correct.

Apply power to the interface. If an active sync signal is present on the input or if the auto-power feature is disabled, the Power LED on the interface lights to indicate that the interface is receiving power.

If the LED does not light, check the wiring at both the interface and the power supply, and ensure that the power supply is connected to a power source.

### If the image does not appear or there is no sound

1. Make sure that all the devices are powered on.
2. Ensure that the connectors are wired correctly at both ends of the cables. Audio cables must be wired for an unbalanced stereo input signal and for a balanced or an unbalanced stereo output signal.
3. If input is from a laptop computer and no picture appears, check the computer's user's guide or contact Extron to determine if special commands are required to output video to the external video port. Also, many laptops' screens shut off after the external video port is activated.
4. Call the Extron S<sup>3</sup> Sales and Technical Support Hotline if the image still does not appear or there is no sound.

### If the image is not displayed correctly

1. Make sure the correct input and output cables are being used and that they are not damaged.
2. Check the DIP switch settings to make sure the interface is putting out the correct sync format.
3. If the picture appears and is stable, but it has ghosting or blooming, verify that the video input is properly terminated. If the problem is not resolved by changing the termination, try using a different input cable. Poor quality or damaged cable can cause ghosting or blooming.
4. If the picture has a white, ghosted image on the right side of the lines/characters, the sharpness may be set to high. Use a Tweaker or screwdriver to turn the sharpness control counterclockwise.
5. If the picture is still not displayed correctly, call the Extron S<sup>3</sup> Sales and Technical Support Hotline.

### When the image is displayed correctly

Once the system has been cabled and tested, the interface can be installed in the wall or furniture. To mount the interface and install optional MAAP devices (CIA111 only), see the next section, "Mounting the Interfaces".

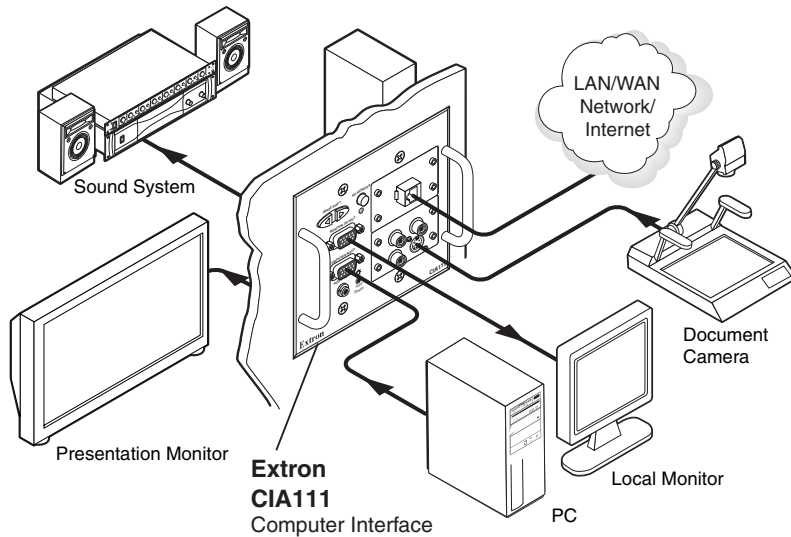


Figure 2-5 — Typical CIA111 application

### Mounting the Interfaces

This section describes how to mount the interfaces. Follow the instructions that are appropriate to your interface.

**CAUTION** Installation and service must be performed by authorized personnel only.

### Mounting the CIA111 or CIA114

The CIA111 mounts to a wall or podium using a two-gang wall box. The CIA114 mounts in a one-gang wall box. The installation must conform to national and local electrical codes and to the equipment's size requirements.

**NOTE** The CIA114 requires a minimum of 3.0" H x 2.0" W x 2.5" D space inside the wall box.

### CAUTION

The CIA111 and CIA114 interfaces must be installed into Underwriters Laboratories (UL) approved electrical wall boxes. See the following section on UL requirements. The wall boxes are not included with the interfaces; the installer is responsible for obtaining and installing the boxes.

### UL Requirements

The following Underwriters Laboratories (UL) requirements listed pertain to the installation of the CIA111 and CIA114 interfaces into a wall or furniture.

1. These units are not to be used beyond their rated voltage range.
2. These units must be installed in UL listed junction boxes.
3. These units must be installed with conduit in accordance with the National Electrical Code.

### Preparing the site and installing the wall box

1. Choose an installation location that will allow cable runs without interference. Allow enough depth for both the wall box and the cables. You may need to install the cables into the wall, furniture, or conduits before installing the interface.
2. Use the appropriate template in appendix A, "Reference Information", as a guide to measure and mark the hole in the wall or furniture for installing the wall box.

### CAUTION

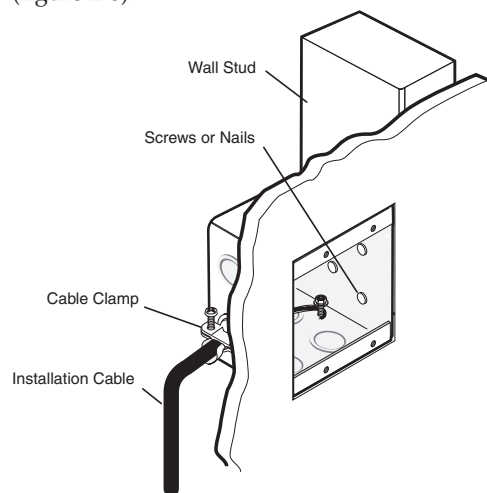
The cut-out templates are not to scale and are provided for reference only. Measure the hole carefully before cutting.

3. Check the opening size by inserting the wall box into the opening. The box should fit easily into the opening. Enlarge or smooth the edges of the opening, if necessary.
4. Feed cables through the wall box punch-out holes, and secure them with cable clamps to provide strain relief.
5. Exposed cable shields (braids or foil) are potential sources of short circuits. Trim back and/or insulate shields with heat shrink, if needed.

### WARNING

To prevent short circuits, the outer foil shield can be cut back to the point where the cable exits the cable clamp. Both braided and foil shields should be connected to an equipment ground at the other end of the cable.

- Insert the wall box into the opening, and attach it to the wall stud or furniture with nails or screws, leaving the front edge flush with the outer wall or furniture surface (figure 2-6).



**Figure 2-6 — Attaching the wall box to a wall stud**

If attaching the wall box to wood, use four #8 or #10 screws or 10-penny nails. A minimum of 1/2 inch (1.3 cm) of the screw threads must penetrate the wood.

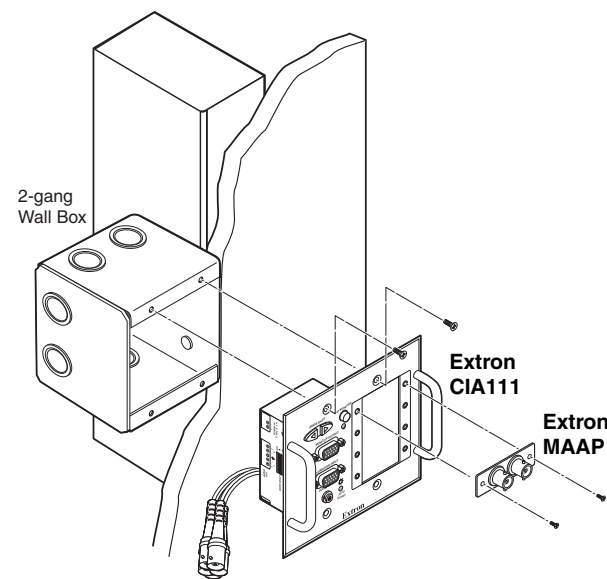
If attaching the wall box to metal studs or furniture, use four #8 or #10 self-tapping sheet metal screws or machine bolts with matching nuts.

- Set the DIP switches and cable and test the interface before fastening the interface into the wall box. *The switches and cables will be inaccessible after installation.* See "Side Panel Features and Cabling", earlier in this chapter, for more information.

### Mounting optional MAAP devices (CIA111 only)

The interface and any optional MAAPs must be cabled before the interface is installed in a wall or furniture. The hex screws needed to attach the MAAPs to the interface are provided with the MAAPs, so no additional screws are needed.

- Before any cables are attached to the front of an MAAP device, secure the MAAP to the faceplate with the provided 3/32" hex screws (figure 2-7).

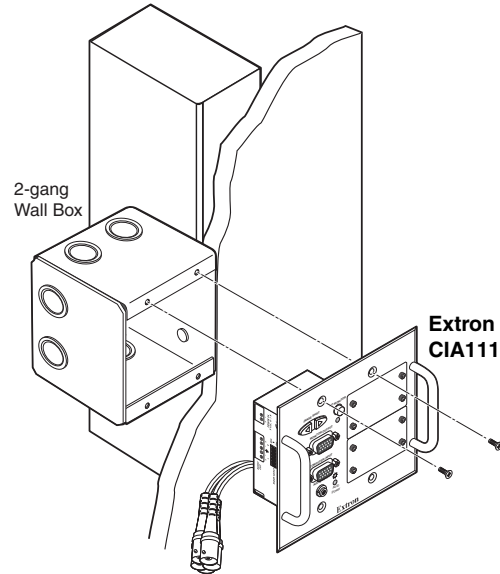


**Figure 2-7 — Mounting the optional MAAP device (standard MAAP device shown)**

- Follow steps [3](#) through [9](#) in the "Installation Overview" section of this chapter. For step [8](#) (mounting the interface to the wall box), see "Mounting the interface to the wall box", on the next page.

### Mounting the interface to the wall box

1. Remove power from the interface by disconnecting the power supply.
2. Place the interface through the opening in the wall or furniture and into the wall box. Take care not to damage the cables, which fit behind the interface, at the back of the wall box.
3. Mount the interface's faceplate to the wall box with the provided machine screws (figure 2-8).



**Figure 2-8 — Mounting the interface to the wall box**

4. Reconnect the power supply and restore power to the equipment.

### Mounting the CIA114F5

The CIA114F5 is designed to fit into a Steel City 665 floor box (figure 2-9). The installation must conform to national and local electrical codes and to the interface's size requirements.

#### **CAUTION**

*The interface must be installed into an Underwriters Laboratories (UL) approved Steel City electrical floor box. The floor box is not included with the interface; the installer is responsible for obtaining and installing the box.*



**Figure 2-9 — CIA114F5 installed**

Preparing the site and cables

- 1. Choose a location that allows cable runs without interference. Allow enough depth for both the floor box and the cables. You need to run the conduit (if required by local code) and cables under the floor before installing the interface.
- 2. Install the floor box in accordance with the documentation that accompanied the box.
- 3. Feed cables through the floor box punch-out holes, and secure them with cable clamps to provide strain relief.
- 4. Exposed cable shields (braids or foil) are potential sources of short circuits. Trim back and/or insulate shields with heat shrink.

**CAUTION** *To prevent short circuits, the outer foil shield can be cut back to the point where the cable exits the cable clamp. Both braided and foil shields should be connected to an equipment ground at the other end of the cable.*

- 5. Set the DIP switches and cable and test the interface before securing the device into the floor box. *The switches and cables will be inaccessible after installation.*

Mounting the interface to the floor box

- 1. Disconnect the power supply to remove power from the interface.
- 2. If the floor box is installed, remove it's top panel and trim frame.
- 3. Place the interface through the opening in the floor and into the floor box. Take care not to damage the cables, which lie behind the interface in the bottom of the box.
- 4. Attach the interface to the floor box by hooking the two locking tabs on the bottom of the interface's faceplate into the slots on the bottom of the box. Secure the faceplate to the top of the floor box with the included 1/2" Phillips screws.
- 5. Install the floor box's top panel and trim frame.
- 6. Reconnect the power supply.



Appendix A

Reference Information

- Specifications
- Part Numbers
- Templates

## Reference Information

### Specifications

#### Video

Gain .....	Unity
Bandwidth.....	250 MHz (-3 dB)

#### Video input and loop-through

Number/signal type.....	1 VGA–UXGA, Mac, Sun RGBHV, RGBS, RGsB
	1 buffered local monitor loop-through identical to the input

**NOTE** *Sync is not stripped from green. RGsB input signals are output as RGsB.*

Connectors .....	2 female 15-pin HD
Nominal level .....	0.7 Vp-p for RGB
Minimum/maximum levels.....	Analog: 0.3 V to 1.5 Vp-p with no offset at unity gain
Impedance.....	75 ohms
Horizontal frequency.....	30 kHz to 130 kHz
Vertical frequency.....	30 Hz to 120 Hz
Return loss.....	<-50 dB @ 5 MHz

#### Video output

Number/signal type.....	1 RGBHV, RGBS, RGsB
Connectors .....	5 BNC female on 4" (10.2 cm) pigtails
Nominal level .....	0.7 Vp-p for RGB
Minimum/maximum levels.....	Analog: 0.3 V to 1.5 Vp-p
Impedance.....	75 ohms
Return loss.....	<-50 dB @ 5 MHz

#### Sync

Input type.....	RGBHV, RGBS, RGsB
Output type.....	RGBHV, RGBS, RGsB
Input level .....	2.0 V to 5.0 Vp-p
Output level.....	TTL: 5.0 Vp-p, unterminated
Input impedance .....	510 ohms
Output impedance.....	75 ohms
Max. propagation delay .....	1.2 $\mu$ s
Polarity.....	Positive or negative (follows input)

#### Audio

Gain.....	Unbalanced output: 0 dB; balanced output: +6 dB
Frequency response .....	20 Hz to 20 kHz, $\pm 0.4$ dB
THD + Noise.....	0.03% @ 1 kHz at nominal level, 0.1% @ 20 kHz at maximum output
S/N.....	>75 dB at maximum output
Stereo channel separation .....	>-113 dB @ 1 kHz to 20 kHz

#### Audio input

Number/signal type.....	1 stereo, unbalanced
Connectors .....	(1) 3.5 mm mini stereo jack
Impedance.....	>10k ohms unbalanced
Nominal level .....	-10 dBV (316 mV)
Maximum level.....	+8.1 dBu, (balanced or unbalanced) at 1% THD+N

**NOTE**  $0 \text{ dBu} = 0.775 \text{ V}_{\text{rms}}$ ,  $0 \text{ dBV} = 1 \text{ V}_{\text{rms}}$ ,  $0 \text{ dBV} \approx 2 \text{ dBu}$

#### Audio output

Number/signal type.....	1 stereo, balanced/unbalanced
Connectors .....	1 direct insertion captive screw connector, 5 pole
Impedance.....	50 ohms unbalanced, 100 ohms balanced
Gain error .....	$\pm 0.09$ dB channel to channel
Maximum level (Hi-Z) .....	>+15 dBu, balanced or unbalanced at 1%THD+N
Maximum level (600 ohm).....	>+13 dBm, balanced or unbalanced at 1%THD+N

#### General

External power supply .....	100 VAC to 240 VAC, 50/60 Hz, external, autoswitchable; to 9 VDC, 0.6 A, regulated
Power input requirements .....	9 VDC, 0.5 A
Temperature/humidity .....	Storage: -40 to +158 °F (-40 to +70 °C) / 10% to 90%, noncondensing Operating: +32 to +122 °F (0 to +50 °C) / 10% to 90%, noncondensing

Reference Information, cont'd

Rack mount	
CIA111, CIA114.....	No, but wall or furniture mountable
CIA111AM.....	No, but Ackerman® GB3 floor box mountable
CIA114F5 .....	No, but Steel City® 665 floor box mountable
CIA114AM.....	No, but Ackerman® GB2 floor box mountable
Enclosure type .....	Metal
Enclosure dimensions	
CIA111 faceplate.....	4.5" H x 5.0" W x 0.1" D (11.4 cm H x 12.7 cm W x 0.2 cm D) (2 gang)
CIA114 faceplate.....	4.5" H x 2.75" W x 0.1" D (11.4 cm H x 7.0 cm W x 0.2 cm D) (1 gang)
CIA111AM faceplate.....	2.75" H x 7.9" W x 1.25" D (7.0 cm H x 20.1 cm W x 3.2 cm D)
CIA114F5 faceplate .....	2.1" H x 5.75" W x 1.0" D (5.3 cm H x 14.6 cm W x 2.5 cm D)
CIA114AM faceplate.....	2.75" H x 6.2" W x 1.25" D (7.0 cm H x 15.7 cm W x 3.2 cm D)
Device .....	2.8" H x 1.9" W x 1.5" D (7.1 cm H x 4.8 cm W x 3.8 cm D) (Depth excludes connectors.)
Product weight .....	0.7 lbs (0.3 kg)
Shipping weight .....	3 lbs (2 kg)
Vibration.....	ISTA 1A in carton (International Safe Transit Association)
Listings.....	ETL (UL1950)
Compliances.....	CE
MTBF.....	30,000 hours
Warranty .....	3 years parts and labor

- NOTE** All nominal levels are at ±10%.
- NOTE** Specifications are subject to change without notice.

Part Numbers

CIA interface part numbers

Included parts	Part numbers
CIA111 with cable guard (black, white)	60-596-12, -13
CIA111 without cable guard (black, white)	60-596-22, -23
CIA114 (black, white)	60-597-12, -13
CIA114F5	60-597-32

Included parts

CIA111

These items are included in each order for a CIA 111:

Included parts	Part numbers
IEC power cord	
9 VDC, 1A external power supply	28-070-01
Blank MAAp, single (black, white) (2)	70-315-11, 70-315-21
Blank MAAp, double (black, white) (1)	70-315-12, 70-315-22
1/4" round hex screws (8)	
3/32" hex wrench	
1/2" Phillips screws (4)	
Tweaker (small screwdriver)	
CIA111 and CIA114 User’s Manual	

CIA114 or CIA114F5

These items are included in each order for a CIA 114 or CIA114F5:

Included parts	Part numbers
IEC power cord	
9 VDC, 1A external power supply	28-070-01
1/2" Phillips screws (2)	
Tweaker (small screwdriver)	
CIA111 and CIA114 User’s Manual	



Reference Information, cont'd

Accessories

These items can be ordered separately:

Accessories	Part numbers
Modular A/V panel for Steel City 665 floor box (for CIA114F5 only)	60-585-11
Assorted MAAPs (CIA111 only)	

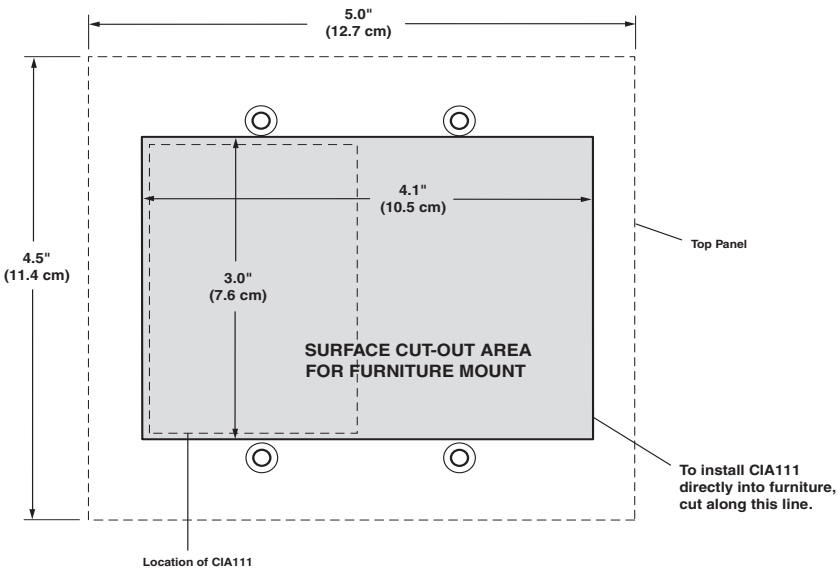
Cables and Adapters

Cables and adapters	Part numbers
VGAM 6' MHRA cable with audio	26-490-02
Mac adapter VGAM kit with audio	70-156-01
13W3 adapter VGAM kit with audio	70-157-03

Templates

Use the appropriate template on the next two pages as a guide to measure and mark the hole in the wall or furniture for installing the wall box for mounting a CIA111 or CIA114 interface.

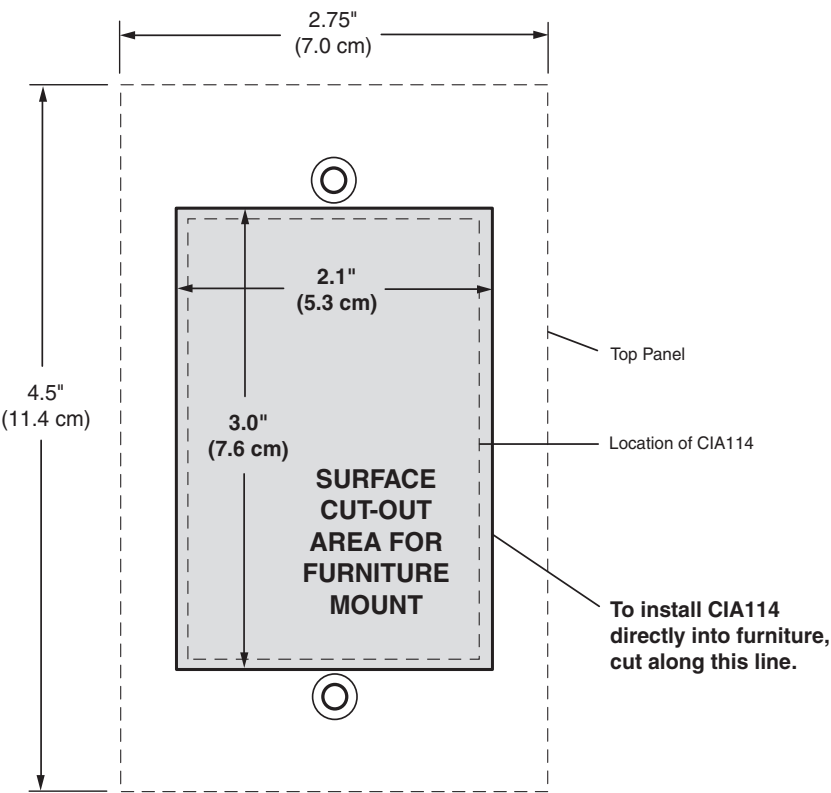
**NOTE** The templates are not to scale and are provided for reference only.



TEMPLATE IS **NOT** FULL SIZE.  
Cut-Out Template for Extron's **CIA111**



Reference Information, cont'd



TEMPLATE IS **NOT** FULL SIZE.  
Cut-Out Template for Extron's **CIA114**